

Features
<ul style="list-style-type: none"> Stability ± 0.05ppm Available Clipped Sinewave (VC)TCXO Two Package Types Extended Temperature Range

Applications
<ul style="list-style-type: none"> Base Stations Stratum 3 Small Cell



Part Numbering Guide

SUS 53 K 33 S 48 V F - 10.000M

SUNTSU
ULTRA STABLE

5.2mm x 3.4mm

CLIPPED SINEWAVE

SUPPLY VOLTAGE
33 : 3.3V $\pm 5\%$
50 : 5.0V $\pm 5\%$

FREQUENCY STABILITY
F : ± 0.50 ppm
S : ± 0.37 ppm
T : ± 0.28 ppm
J : ± 0.1 ppm
**K : ± 0.05 ppm

OPERATING TEMPERATURE RANGE
07 : 0°C - +70°C
16 : -10°C - +60°C
27 : -20°C - +70°C
48 : -40°C - +85°C
*50 : -50°C - +90°C
*59 : -55°C - +95°C

TCXO/VCTCXO
BLANK : TCXO
V : VCTCXO

FREQUENCY
MHz

PULLABILITY
BLANK : TCXO
F : ± 8.0 ppm
G : ± 5.0 ppm
H : ± 12.0 ppm

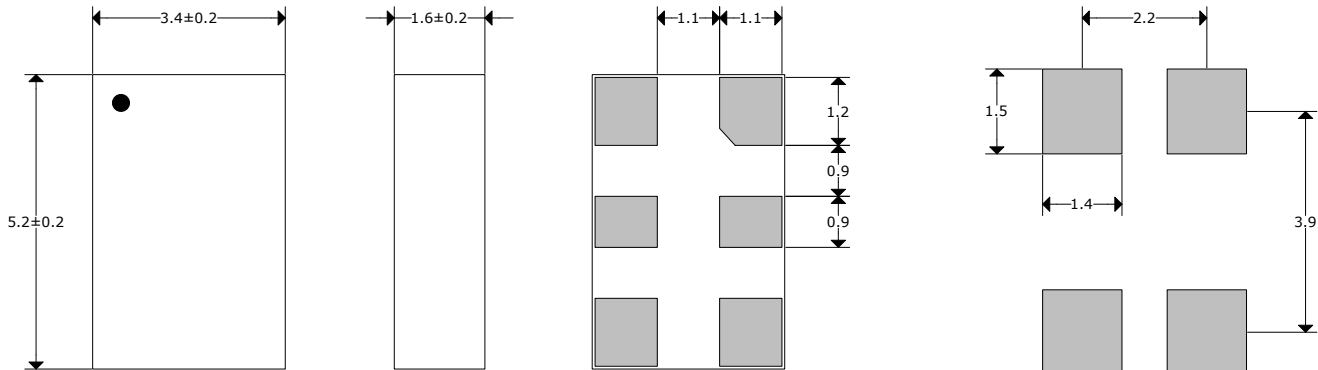
Cage Code: 4GUT4
To customize your parameters contact a Suntsu representative.
* For operating temperature options 50 & 59 contact a Suntsu representative.
** For frequency stability option K contact a Suntsu representative; only available with Operating Temperature of -40°C - +85°C



Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	10		52	
Frequency Tolerance	ppm	± 0.3	± 0.5	± 1.0	at 25°C
Freq Stability vs Op Temp (ref at 25°C)	ppm	± 0.05		± 0.5	See part numbering guide for options.
Supply Sensitivity	ppm			± 0.1	V _{DD} $\pm 5\%$
Load Sensitivity	ppm			± 0.2	Load $\pm 5\%$
Aging/First Year	ppm			± 1.0	Standard
Operating Temperature	°C	-55		95	See part numbering guide for options.
Storage Temperature	°C	-55		125	
Supply Voltage (V _{DD}) - 3.3V Option	V	3.135	3.3	3.465	
Supply Voltage (V _{DD}) - 5.0V Option	V	4.750	5.0	5.250	
Current (I _{DD})	mA			10	
Voltage (VC, VCTCXO) - 3.3V Option	V	0.5		2.5	
Voltage (VC, VCTCXO) - 5.0V Option	V	0.5		2.5	
Pullability (VCTCXO)	ppm	± 5.0		± 12.0	See part numbering guide for options.
Linearity (VCTCXO)	%			10	
Output Level (Clipped Sinewave)	Vp-p	0.8			
Output Load (Clipped Sinewave)	k Ω //pF		10//10		
Tuning Slope			Positive		
Start-Up Time	ms			10	
VC Input Impedance (VCTCXO)	k Ω	200			
Phase Noise (Typical) 10Hz Offset	dBc/Hz			-92	
Phase Noise (Typical) 100Hz Offset	dBc/Hz			-120	
Phase Noise (Typical) 1KHz Offset	dBc/Hz			-140	
Phase Noise (Typical) 10KHz Offset	dBc/Hz			-145	
Phase Noise (Typical) 100kHz Offset	dBc/Hz			-150	

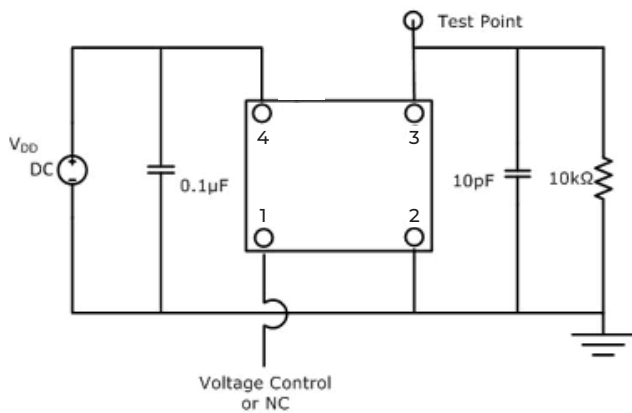
Outline Drawing & Land Pattern

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

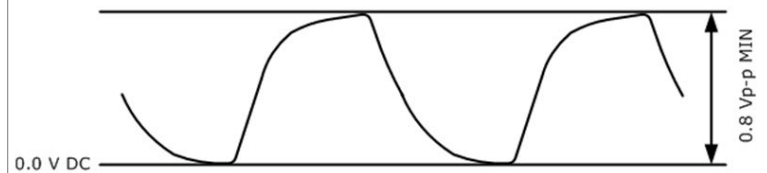


PIN	FUNCTION
1	V _{COM} /NC
2	GND
3	OUTPUT
4	V _{DD}

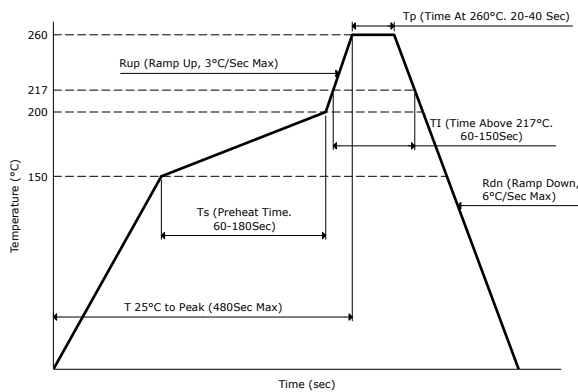
Test Circuit (Clipped Sinewave)



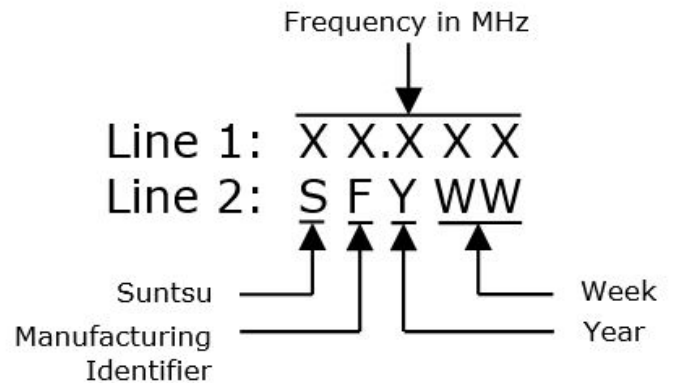
Waveform (Clipped Sinewave)



Reflow Profile



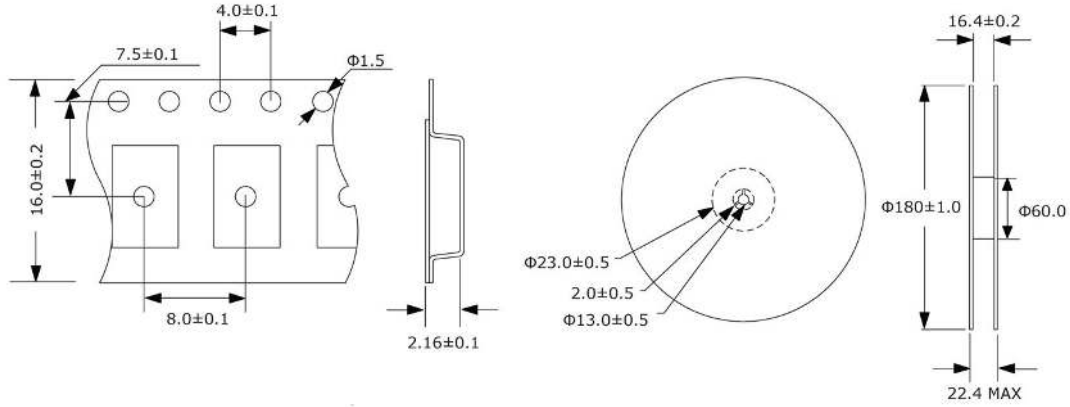
Part Marking



Tape And Reel Dimensions

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

1,000pcs/Reel



Reliability

Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESD22-B102-C
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC